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1... MR. JEFFERSON: My name is Bob Jefferson. [I'm an independent consultant. I have been active in the research and development and safety of transporting radioactive materials for the past 26 years.

We have been transporting spent fuel in this country since 1963. Based on regulations developed by the National Academy of Sciences in 1946 and later adopted world-wide in 1953 by the International Atomic Energy Agency, all transportation of high-level radioactive materials are governed under the same set of regulations world-wide and have been since that time.

Understand that the basis of the regulations are very simple. The first assumption in the development of the regulations was that there are going to be accidents. If you are going to transport these things, by highway or by rail, there will be accidents. And so early on the decision was made that you have to provide protection against accidents.

Secondly, the basis of the regulations was that human beings are fallible. So the basis of the regulations is that you depend upon the package and the package alone, for safety. The package has to provide all of the protection that you need to make this safe.

Now, we have experience in this country with about 3,000 shipments, and during that experience base we have had eight accidents -- eight accidents involving spent fuel shipping casks. ]

AUDIENCE MEMBER: Does that include --

FACILITATOR HOLMES: I will ask please don't interrupt. Go ahead.

1 cont. MR. JEFFERSON: [Of those eight accidents, four of them involved empty casks. And that was what you would expect, since they go both directions.

World-wide, there have been tens of thousands of shipments, and there have been an equal experience with accidents. And the encouraging thing is, there has never been an accident anywhere in the world involving a shipment of these materials that has ever released any radiation to the public. ]

AUDIENCE MEMBER: That's a lie.

2... MR. JEFFERSON: [Now, in the 1970's I was asked to conduct some experiments to evaluate whether or not our analytical tools were accurate in predicting what would happen to these shipping containers in severe accidents.

The other thing that I wanted to do was to try to develop some understanding of the environment of a severe accident, so that we would have a better handle on how to analyze these things. These tests were conducted with public involvement. On the first test we had 900 people show up for the test. Everybody loves to see smashing and crashing. The first test involved a 60-mile-an-hour impact of a truck mounted-shipment cask into a 20-foot cube of reinforced concrete. 960 tons of it.

The second test we took the same cask, since it suffered no damage, and impacted it on another truck at 84 miles an hour -- that's roughly twice the kinetic energy. Again no problem. We did a series of five full-scale tests during the time I was with Sandia Labs -- we did a total of about 1500 tests involving transportation of these materials.

The result was, of these tests -- since the public was involved, I would get up in front of people and say here is what we are going to do, here is what we expect after the tests. They were free to go up and look

2 cont. for themselves. And in every single case we predicted the damage accurately. If there was any inaccuracy, we overpredicted the damage.

The next thing we did was to compare the regulatory requirements with the possible accidents that we could imagine. In other words, do the regulations bound all possibilities?

3 That material, that study, is presented in the EIS, and you'll find it there. And it turns out that the regulations cover all but about 1/100th of one percent of all imagined accidents -- and I emphasize the word "imagined." Because we did another study conducted a few years ago in which we took all of the severe accidents that have ever occurred in this country -- that includes the ammunition train that exploded in Rosemead, California. It includes the fire in Livingston, Louisiana. It includes the fire in the tunnel between Oakland and San Francisco. We looked at all of those severe accidents, and we found that there was no environment in those accidents severe enough to challenge these containers. If there had been a container involved in any of those accidents, there would have been zero leakage.

4 Now, I said early on we take no credit for human activity in this, but we do a lot of things in moving these materials. First of all, the drivers. If a driver has had a moving violation in the past year -- past five years, he's not allowed to drive one of these rigs. I don't know how many of you that eliminates, but that eliminates me.

FACILITATOR HOLMES: We are at the five-minute mark now.

MR. JEFFERSON: Okay. Can I have one more?

FACILITATOR HOLMES: Sure.

5 MR. JEFFERSON: Okay. We do routing. And you have heard about that. We do tracking; you have heard about that. We have communications from the drivers of these rigs to a central communications point in Washington, and we have a system on the rig so that -- on trucks, at any rate -- so that if he is somehow interdicted, the driver can press a button, and it takes four hours to get the rear axle unlocked so you can move the trailer.

Over and above all of that, these shipments will have escorts; as they go through municipalities, they will have armed escorts provided by the police department.

You have about 10,000 18-wheelers transit this part of California every day. We will add on the order of one or two shipments a day through this community. So it's not a big impact that way.

It's the only hazardous material that we are shipping today; the only one that's required to be shipped in containers specifically designed to resist severe accidents and to survive.

So transportation is not a technical matter; it's not a technical question in the EIS. It's already been done, and there's been plenty of analysis, and it's continuing to be done.

I think I would like to close with one final statement. If I were given the opportunity driving down I-10 of smuggling up to one of these, versus smuggling up next to a gasoline tanker, I will pick this one every time.

FACILITATOR HOLMES: Thanks very much. I am sorry to interrupt, one of our previous speakers has actually --

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AUDIENCE MEMBER: I can hold off for a minute.

FACILITATOR HOLMES: Oh, okay. Mr. Bertram Wolfe to speak, and to be followed by Jay Lindberg.